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EXAMINER

LACLAIR, DARCY D

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Attachment to Advisory Action

1. Applicant's response filed **3/31/2010** has been fully considered but it is not persuasive. Specifically, applicant argues:

(A) A corrected IDS has been submitted to correct a typographical error, the correct patent number is 4,877,595.

(B) Applicants surmise that the issue in this case involves the evidence submitted in the Nowak Declaration submitted 8/25/2009, and whether that evidence overcomes any alleged *prima facie* obviousness based on the references of record. Applicants respond to the criticisms of the declaration presented in the Final Action.

(B.1) Aerosil R8200 is a structure modified, hydrophobic fumed silica which has been destructured by a ball mill. As a result, the structure of R 8200 is much lower than the structure of, for example, Aerosil R 202 W 60 or VV 90. The differences can be seen on the attached TEM pictures. Thus the thickening efficiency of Aerosil R 8200 is lower compared to Aerosil R 202 VV60 or VV 90, and therefore the R 8200 does not act as a thixotrope and thickening agent. Claim 1 of the present invention refers to thixotropic adhesive and sealant compositions; non-thixotropic compositions are excluded by the claims.

(B.2) The thixotropic index for Aerosil R 8200, R 202 VV 60, and R 202 VV 90 are provided. This shows significant difference regarding the thixotropic properties obtained as a result of this invention. The Aerosil 202 species show thixotropy and pasty like behavior, whereas the R 8200 shows behavior like a liquid. Generally,

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adhesive and sealant systems having an index of higher than 3 are very thixotropic, and those having an index of almost 1.0 or smaller show no thixotrophy.

(B.3) The incorporation times of VV60 and VV 90 are significantly reduced, even though the rheological and thixotropic properties are at the same high level compared to the undensified grades.

(C) The examiner takes the position that the combination of Klinge with Meyer would produce a reduction in the mixing time for the silica; Applicants point out that Klinge does not show that the hydrophobic densified silicas produced by the pressing filter method exhibit shorter incorporation time while maintaining the thickening and thixotropic properties of the adhesives and sealant composition, or the unexpectedly better performance than hydrophilic densified silicas. An example of Aerosil 150 compacted and uncompact is shown; the incorporation time of compacted hydrophilic silicas is decreased, but the decrease in thickening and thixotropic effect is too high for industrial use.

(D) With respect to the combination of Gruenewaelder and Hasenzahl, the examiner points out that the silica of the reference has a density of 80 to 260 g/l. This is presumably the density taught by the Hasenzahl reference. Gruenewaelder teaches that a fumed silica adjusts pseudoplastic behavior and thixotrophy, but refers only to the finished compound, and not when the silica is being incorporated; at this time, the pseudoplasticity has not yet developed. Therefore the assumption that the incorporation time would be reduced is not correct. Hasenzahl does not teach that the densified hydrophobic silica grades will reduce the incorporation time or maintain the thixotropic

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properties of the silica; Hasenzhal teaches that the flowability of compositions is higher when higher densified silicas (100 to 200 g/l).

2. **With respect to argument (A)**, the corrected IDS is noted, however patent number 4,877,595 is cited on the PTO-892, and therefore will be published on the face of any patent issuing from this case. It is further noted that the foreign document WO 2003/029338 cited on the IDS filed 6/5/2009 is not present in the electronic file wrapper.

With respect to argument (B), applicant's arguments have been considered but are **not persuasive**. First, applicant has provided additional data and facts in the after final remarks. There are several problems with this communication. First, Applicant has presented additional evidence, which is considered untimely as it is (i) presented after final and (b) presented without any specific request from the examiner or without any prior agreement between applicant and examiner regarding presentation of evidence after final. Second, Applicant has presented the new evidence in the remarks. In order for the data to be probative, it must be presented in a signed declaration.

With respect to the content of the data presented, applicant focuses on the thixotropic index of the respective silicas. Although applicant has indicated a rough range for thixotropic index defining thixotropic compositions (for example, at page 13 of the remarks of 3/31/2010 and elsewhere), nowhere in the Claims or specification has applicant defined "thixotropic" with respect to its use in the claims. Thus it is not clear that Aerosil R8200 does not meet the criteria for a thixotropic composition. In the interest of compact prosecution, it is noted that were applicant to submit a declaration

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with the same data **and** amend the claims to further define thixotrophy based on the specification and the examples therein, it would overcome references relying on the use of ball mill compacted Aerosil R8200. It is further noted that this does not construe an agreement on the examiner's part to consider further evidence after final.

With respect to argument (C), applicant's arguments have been considered but are **not persuasive**. First, it is noted that the example showing Aerosil 150 is not relevant as this is a hydrophilic silica. Meyer teaches a highly hydrophobic structurally modified silica. (See abstract) Therefore it would be obvious to select a hydrophobic silica. Meyer desires compaction from 50 to 400 g/L. (Table after par 6) Klinge provides a method of achieving densities of 140-190 and 90-120 g/l (See col 4, Examples) which falls within the range of the structural modification desired by Meyer. In response to applicant's argument that Klinge does not show the hydrophobic densified silicas produced by the pressing filter method have the effect of reducing incorporation time and maintaining the thickening and thixotropic properties, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). First, the teachings of Klinge exemplify silica compressed by a filter equipped with a pressing band. (See abstract) This is consistent with a pressing filter belt, which is specifically elucidated as a compression method in applicant's claims. Although the combination of Klinge and Meyer have different motivation to combine, the

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effect would be the same; namely the use of a filter belt compacted hydrophobic pyrogenic silica in an adhesive and sealant system.

With respect to argument (D), applicant's arguments have been considered but are **not persuasive**. In response to applicant's argument that Hasenzahl does not teach that the densified hydrophobic silica grades will reduce the incorporation time or maintain the thixotropic properties of the silica, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Furthermore, Gruenewaelder teaches using a hydrophobic fumed silica as a thixotrophy agent, and specifically exemplifies Aerosil R 202. (See par [0018],[0032]) Applicant confirms that Hasenzahl teaches that the flowability of compositions is higher when higher densified silicas (100 to 200 g/l) are used. It is expected that the lower content of silica present during the incorporation of the silica would not increase the viscosity of the composition, and therefore no significantly worse behavior is expected during incorporation. Furthermore, the compaction provided by Hasenzahl would render the silica consistent with that of applicant's silica, and therefore it is expected that the silica would behave in the same way upon addition to a composition. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

/D. D. L./
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